

ADDITIONAL NOTES ON THE ERIOCAULACEAE. LXXII

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ERIOCAULACEAE Lindl.

Additional & emended bibliography: Rottb., Act. Lit. Univ. Hafn. 1: 272, pl. 1, fig. 1. 1778; Sweet, Hort. Brit., ed. 1, 1: 435 (1826) and ed. 2, 546 & 597. 1830; G. Don in Loud., Hort. Brit. Suppl. 1: 633. 1832; Loud., Hort. Brit., ed. 2, 719. 1832; Sweet, Hort. Brit., ed. 3, 719. 1839; G. Don in Loud., Hort. Brit. Suppl. 2: 547. 1850; Engl., Syllab. Pflanzenfam., ed. 2, 86 (1898), ed. 3, 92 (1903), ed. 5, 94 (1907), and ed. 6, 99. 1909; E. D. Merr. in Merr. & Merritt, Philip. Journ. Sci. Bot. 5: 301. 1910; Praeger, Journ. Roy. Hortic. Soc. Lond. 36: 302-303, fig. 107. 1910; Praeger, Irish Natur. 21: 26. 1912; Gilg in Engl., Syllab. Pflanzenfam., ed. 7, 138 & 139, fig. 140 (1912) and ed. 8, 140 & 141, fig. 140. 1919; Fedde in Just, Bot. Jahresber. 44: 19 (1922) and 45 (1): 517, 520, & 549. 1923; Fedde & Schust. in Just, Bot. Jahresber. 45 (1): 20. 1923; Gilg in Engl., Syllab. Pflanzenfam., ed. 9 & 10, 152, fig. 144. 1924; Kräusel in Just, Bot. Jahresber. 44: 1161 & 1163. 1926; Fedde in Just, Bot. Jahresber. 44: 1415. 1927; Diels in Engl., Syllab. Pflanzenfam., ed. 11, 154, fig. 144. 1936; León, Fl. Cuba, imp. 1, 1: 278-284, 423, 426, 428, 435, & 436, fig. 112 & 113. 1946; M. R. Henderson, Malay. Nat. Journ. 6: 212. 1950; Gaussen, Viart, Legris, & Labroue, Trav. Sect. Scient. Techn. Inst. Franç. Pond. Hors Ser. 5: 61. 1965; Boivin & Cayouette, Naturaliste Canad. 94: 524. 1967; Naik, Journ. Indian Bot. Soc. 52: 108-113. 1973; Lepage, Naturaliste Canad. 101: 928. 1974; Rousseau, Géogr. Florist. Qué. [Trav. Doc. Cent. Étud. Nord 7:] 120-121, 382, 470, 480, 498, 550, 586, 625, 705, & 762, map 221 & 222. 1974; Satake, Journ. Jap. Bot. 49: 180-183, 237-240, & 313-314. 1974; Bole, Excerpt. Bot. A.26: 302. 1975; Cárdenas de Guevara, Act. Bot. Venez. 10: 23, 35, 39, & [69]. 1975; Hinton & Rzedowski, Anal. Esc. Nac. Cienc. Biol. 21: 61. 1975; Hocking, Excerpt. Bot. A.26: 6, 89, & 90. 1975; Hurusawa, Excerpt. Bot. A. 26: 99. 1975; J. A. Steyerl., Act. Bot. Venez. 10: 220, 225, 226, & 232. 1975; R. D. Wood, Hydrobot. Meth. 15. 1975; Anon., Biol. Abstr. 61: AC1.298, AC1.667, & AC1.718. 1976; Duke, Phytologia 34: 24. 1976; Fleming, Genelle, & Long, Wild Fls. Fla. 25. 1976; Follmann-Schrag, Excerpt. Bot. A.26: 508 & 513. 1976; Hocking, Excerpt. Bot. A.28: 259. 1976; Keys, Chinese Herbs 290 & 374. 1976; Krug, Excerpt. Bot. A.26: 415. 1976; Lakela, Long, Fleming, & Genelle, Fl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 38-39, 159, & 172. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, x, 17, 259-262, 938, 944, & 958. 1976; A. L. Moldenke, Phytologia 35: 62. 1976; Moldenke & Sm. in Reitz, Fl. Illus. Catar. I Erio. [1]-103. 1976; Monteiro-Scanavacca & Mazzoni, Bol. Bot. Univ. S. Paulo 4: 23-30 & [105]-111, fig. 1-6. 1976; Monteiro-Scanavacca, Mazzoni, & Giulietti, Bol. Bot. Univ. S. Paulo 4: [61]-72, fig. 1-15. 1976; Rogerson & Becker, Bull. Torrey Bot.

Club 103: 145. 1976; Soukup, Biota 11: 22. 1976; J. L. Thomas, Bull. Ala. Mus. Nat. Hist. 2: 9. 1976; Moldenke, Phytologia 34: 247--249, 252--254, 256--260, 262--268, 271--278, 281, 390--406, 485--497, 499--503, 505--509, & 511 (1976), 35: 14--36 (1976), 35: 109--131, 252--264, 277--322, 332--364, 420--458, & 507--511 (1977), and 36: 28--32, 34--40, 42, 43, 45, 47, 49--51, 54--85, & 116. 1977; Moldenke, Biol. Abstr. 63: 2452 & 2461. 1977; A. L. Moldenke, Phytologia 36: 416. 1977; F. H. Montgomery, Seeds & Fruits 108 & 219, fig. 4. 1977; Rogerson, Becker, & Prince, Bull. Torrey Bot. Club 104: 82. 1977.

#### BLASTOCAULON Ruhl.

Additional bibliography: Rousseau, Géogr. Florist. Qué. [Trav. Doc. Cent. Étud. Nord 7:] 120--121, 382, 470, 480, 498, 550, 625, 705, & 762, maps 221 & 222. 1974; Follmann-Schrag, Excerpt. Bot. A.26: 503. 1976; Moldenke, Phytologia 34: 390--391 & 499 (1976), 35: 14 (1976), and 35: 287, 288, 309, & 407. 1977; F. H. Montgomery, Seeds & Fruits 108 & 219, fig. 4. 1977.

#### CARPTOTEPALIA Moldenke

Additional bibliography: Cárdenas de Guevara, Act. Bot. Venez. 10: 36 & [69]. 1975; Follmann-Schrag, Excerpt. Bot. A.26: 504. 1976; Moldenke, Phytologia 34: 272, 391, & 500 (1976), 35: 31 (1976), and 35: 507. 1977.

#### COMANTHERA L. B. Sm.

Additional bibliography: Cárdenas de Guevara, Act. Bot. Venez. 10: 36 & [69]. 1975; Follmann-Schrag, Excerpt. Bot. A.26: 508. 1976; Moldenke, Phytologia 34: 391--392 & 501 (1976), 35: 306, 359, & 507 (1977), and 36: 74 & 75. 1977.

#### COMANTHERA KEGELIANA (Körn.) Moldenke

Additional bibliography: Moldenke, Phytologia 34: 391--392 (1976), 35: 306 & 359 (1977), and 36: 74 & 75. 1977.

#### ERIOCAULON Gron.

Additional & emended bibliography: Sweet, Hort. Brit., ed. 1, 1: 435 (1826) and ed. 2, 546 & 597. 1830; Loud., Hort. Brit., ed. 2, 719. 1832; G. Don in Loud., Hort. Brit. Suppl. 1: 633. 1832; Sweet, Hort. Brit., ed. 3, 719. 1839; G. Don in Loud., Hort. Brit. Suppl. 2: 547. 1850; Engl., Syllab. Pflanzenfam., ed. 2, 86 (1898), ed. 3, 92 (1903), ed. 5, 94 (1907), and ed. 6, 99. 1909; Praeger, Journ. Roy. Hort. Soc. Lond. 36: 302--303, fig. 107. 1910; Praeger, Irish Natur. 21: 26. 1912; Gilg in Engl., Syllab. Pflanzenfam., ed. 7, 138 (1912) and ed. 8, 140. 1919; Fedde & Schust. in Just, Bot. Jahresber. 44: 19. 1922; Fedde in Just, Bot. Jahresber. 45 (1): 520. 1923; Fedde & Schust. in Just, Bot. Jahresber. 45 (1): 20. 1923; Gilg in Engl., Syllab. Pflanzenfam., ed. 9 & 10, 152. 1924; Kräusel in Just, Bot. Jahresber. 44: 1161 & 1163. 1924; Fedde in Just, Bot. Jahresber. 44: 1415. 1927; Diels in Engl., Syllab. Pflanzenfam., ed. 11, 154. 1936; León, Fl. Cuba, imp. 1, 1: 278--

284 & 423, fig. 112. 1946; M. R. Henderson, Malay. Nat. Journ. 6: 202. 1950; K. Jones, Taxon 9: 183. 1960; Lam & Leenhouts, Blumea 10 (2): xvi. 1960; Gaussen, Viart, Legris, & Labroue, Trav. Sect. Scient. Techn. Inst. Franç. Pond. Hors Ser. 5: 61. 1965; Boivin & Cayouette, Naturaliste Canad. 94: 524. 1967; Naik, Journ. Indian Bot. Soc. 52: 108--113, fig. 1--3. 1973; Lepage, Naturaliste Canad. 101: 928. 1974; Rousseau, Géogr. Florist. Qué. [Trav. Doc. Cent. Étud. Nord 7:] 120, 382, 470, 480, 498, 509, 550, 625, 705, & 762, maps 221 & 222. 1974; Satake, Journ. Jap. Bot. 49: 180--183, 237--240, & 313--314. 1974; Cárdenas de Guevara, Act. Bot. Venez. 10: 36--37 & [69]. 1975; Hinton & Rzedowski, Anal. Esc. Nac. Cienc. Biol. 21: 61. 1975; Bole, Excerpt. Bot. A.26: 302. 1975; Hocking, Excerpt. Bot. A.26: 89 & 90. 1975; Hurusawa, Excerpt. Bot. A.26: 99. 1975; J. A. Steyerl., Act. Bot. Venez. 10: 220, 225, 226, & 232. 1975; R. D. Wood, Hydrobot. Meth. 15. 1975; Duke, Phytologia 34: 24. 1976; Fleming, Genelle, & Long, Wild Fls. Fla. 24. 1976; Follmann-Schrag, Excerpt. Bot. A.26: 508. 1976; Keys, Chinese Herbs 290 & 374. 1976; Hinton, Excerpt. Bot. A.26: 415. 1976; Lakela, Long, Fleming, & Genelle, Fl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 38 & 159. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, x, 17, 259--261, & 938. 1976; A. L. Moldenke, Phytologia 35: 62. 1976; Moldenke & Sm. in Reitz, Fl. Illus. Catar. I Erio: 4--40, 43, 49, 55, 58, 67, 73, 89, 94, 95, & 98--100, pl. 1--5. 1976; Monteiro-Scanavacca & Mazzoni, Bol. Bot. Univ. S. Paulo 4: [23], 24, & 27. 1976; Monteiro-Scanavacca, Mazzoni, & Giulietti, Bol. Bot. Univ. S. Paulo 4: 65 & 66. 1976; J. L. Thomas, Bull. Ala. Mus. Nat. Hist. 2: 9. 1976; Moldenke, Phytologia 34: 248, 249, 252, 254, 256, 260, 262--268, 273, 274, 277, 278, 392--406, 485--497, 502, & 503 (1976), 35: 35, 36, & 62 (1976), 35: 116, 117, 121--124, 128, 129, 131, 254, 256, 286, 288, 289, 292, 295, 303, 309, 310, 317, 318, 320--322, 341, 347, 350, 354, 359, 421--423, 425--427, 429, 454, 455, 457, & 508 (1977), and 36: 28, 30, 34, 37--40, 42, 56, 57, 68, 72, 80--82, & 84. 1977; Moldenke, Biol. Abstr. 63: 2461. 1977; A. L. Moldenke, Phytologia 36: 416. 1977.

Sweet (1839) classifies this genus in the Restiaceae, as was done also by many other early authors.

The J. Kohlmeyer 2039, distributed as Eriocaulon sp., actually is Lachnocaulon anceps (Walt.) Morong, while Kohlmeyer 2358 [Herb. Hamann 1243] is Mesanthemum radicans (Benth.) Körn., Hamann 2895 is Syngonanthus huberi Ruhl., and Hamann 2894 is Syngonanthus longipes Gleason.

#### ERIOCAULON ACHITON Körn.

Additional bibliography: Moldenke, Phytologia 34: 264, 392, & 399. 1976.

#### ERIOCAULON ALPESTRE Hook. f. & Thoms.

Additional synonymy: Eriocaulon alpestre var. alpestre [Hook. f. & Thoms.] apud Van Royen, Blumea 10: 127. 1960.

Additional bibliography: Van Koyen, *Blumea* 10: 127. 1960; Moldenke, *Phytologia* 34: 393, 488, & 491 (1976) and 36: 42. 1977.

ERIOCAULON ALTOGIBBOSUM Ruhl.

Additional bibliography: Moldenke, *Phytologia* 29: 88. 1974.  
Hatschbach encountered this plant on "margens arenosas de corrego, zona de cerrado", flowering and fruiting in October.  
Additional citations: BRAZIL: Goiás: Hatschbach 38920 (Z).

ERIOCAULON AQUATICUM (J. Hill) Druce

Additional synonymy: Eriocaulon septangulare var. septangulare [With.] apud Rousseau, *Géogr. Florist. Qué.* [Trav. Doc. Cent. *Etud. Nord* 7:] 120. 1974.

Additional bibliography: Sweet, *Hort. Brit.*, ed. 1, 1: 435 (1826) and ed. 2, 546. 1830; Loud., *Hort. Brit.*, ed. 2, 719. 1832; Sweet, *Hort. Brit.*, ed. 3, 719. 1839; Engl., *Syllab. Pflanzenfam.*, ed. 2, 86 (1898), ed. 3, 92 (1903), ed. 5, 94 (1907), and ed. 6, 99. 1909; Praeger, *Journ. Hort. Soc. Lond.* 36: 302—303, fig. 107, 1910; Praeger, *Irish Natur.* 21: 26. 1912; Gilg in Engl., *Syllab. Pflanzenfam.*, ed. 7, 138 (1912), ed. 8, 140 (1919), and ed. 9 & 10, 152. 1924; Kräusel in *Just, Bot. Jahresber.* 44: 1161 & 1163. 1926; Fedde in *Just, Bot. Jahresber.* 44: 1415. 1927; Diels in Engl., *Syllab. Pflanzenfam.*, ed. 11, 154. 1936; Monteiro-Scanavacca, Mazzoni, & Giulietti, *Bol. Bot. Univ. S. Paulo* 4: 65 & 66. 1976; Moldenke, *Phytologia* 34: 393 (1976) and 36: 57. 1977.

Additional & emended illustrations: Praeger, *Journ. Hort. Soc. Lond.* 36: fig. 107. 1910; Melchior in Engl., *Syllab. Pflanzenfam.*, ed. 12, 2: 556, fig. 230 A—C. 1964.

Loudon (1832) lists this species as a garden plant in Great Britain, introduced from Scotland (where it is native), but it is not certain that he actually means that it is (or was) in cultivation in England. He calls it the "jointed pipewort".

ERIOCAULON ARECHAVALETAE Herter

Additional bibliography: Moldenke, *Phytologia* 24: 342—343 (1972) and 33: 153 & 183. 1976.

ERIOCAULON ARENICOLA Britton & Small

Additional & emended bibliography: Fedde & Schust. in *Just, Bot. Jahresber.* 45 (1): 20. 1923; León, *Fl. Cuba*, imp. 1, 1: 280 & 423. 1946; Moldenke, *Phytologia* 32: 464. 1975.

ERIOCAULON ARGENTINUM Castell.

Additional bibliography: Moldenke, *Phytologia* 29: 90. 1974; Moldenke & Sm. in Reitz, *Fl. Ilus. Catar.* I *Erio*: 7, 25—28, & 98, pl. 5, fig. 8 & 9. 1976; Moldenke, *Phytologia* 36: 72. 1977.

Additional illustrations: Moldenke & Sm. in Reitz, *Fl. Ilus. Catar.* I *Erio*: 25, pl. 5, fig. 8 & 9. 1976.

Pedersen encountered this species in wet ground, flowering and fruiting in October.

Additional citations: ARGENTINA: Corrientes: Pedersen 9266 (N).

## ERIOCAULON ATABAPENSE Moldenke

Additional bibliography: Moldenke, *Phytologia* 29: 91. 1974; Cárdenas de Guevara, *Act. Bot. Venez.* 10: 37. 1975.

## ERIOCAULON ATRATUM Körn.

Additional bibliography: Moldenke, *Phytologia* 34: 393—394 (1976) and 35: 354. 1977.

Recent collectors describe this plant as having the inflorescence-heads "white" or "white and fluffy" or "fluffy and grayish" and have encountered it in wet places along roadsides in muddy patana grasslands, "in tussock grass and on mountain tops", and along the shady banks of streams near teafields, as well as in small areas of marshy grassland in forest openings, at 1500—2250 meters altitude, flowering in November, and both flowering and fruiting in February, March, and October. Jayasuriya & Sumithraarachchi refer to it as "common on rocky-sandy island in river".

Material has been misidentified and distributed in some herbaria as E. longicuspe Hook. f.

Additional citations: SRI LANKA: Davidse & Sumithraarachchi 8002 (W—2784452), 8035 (W—2784394); Jayasuriya & Sumithraarachchi 1567 (W—2768303); Sohmer & Waas 8722 (Lc, W—2784444); Sumithraarachchi DBS.114 (W—2767926); Sumithraarachchi & Jayasuriya DBS.178 (W—2784402).

## ERIOCAULON ATRATUM var. MAJOR Thwaites

Additional bibliography: Moldenke, *Phytologia* 34: 394 (1976) and 35: 350 & 354. 1977.

Recent collectors describe the flower-heads of this plant as "white" and have found it growing in open grass in marshy clearings of montane forests, at 2250 m. altitude, flowering in October.

Additional citations: SRI LANKA: Davidse & Sumithraarachchi 7952 (W—2784398), 8003 (W—2784453).

## ERIOCAULON AUSTRALE R. Br.

Additional bibliography: Sweet, *Hort. Brit.*, ed. 1, 1: 435 (1826) and ed. 2, 546. 1830; Loud., *Hort. Brit.*, ed. 2, 719. 1832; Sweet, *Hort. Brit.*, ed. 3, 719. 1839; Moldenke, *Phytologia* 34: 264, 265, 267, 394—395, 494, & 495 (1976) and 36: 38 & 39. 1977.

Mrs. Clemens has collected what may be this species or E. willdenovianum in highway ditches with bush margins, in swamps near the sea, and in swamps with Restio and Pimelea. Her nos. 42258, 42404, & 44153, all cited below, exhibit the very narrow and elongated basal leaves overtopping the inflorescences so characteristic of E. willdenovianum, rather than the shorter narrow ones characterizing most of the Asiatic plants referred here. These two taxa, along with the very similar E. sexangulare L., require more careful study. Balgooy's collection, also cited below, has the typical short narrow leaves and he describes

the plant as an herb with the flower-heads "gray-brown" and the anthers white. He found it growing in sandy places along streams in a water-catchment area in rainforest, at 250 m. altitude.

Both Sweet (1830) and Loudon (1832) list this plant as cultivated in England, introduced from New South Wales in 1822. They call it the "New Holland pipewort".

Additional citations: MALAYA: Penang: Balgooy 2406 (Ac). AUSTRALIA: Queensland: M. S. Clemens 42258 (Mi), 42361 (Mi), 42404 (Mi). GREAT BARRIER REEF: Stradbroke: M. S. Clemens 44153 (Mi).

ERIOCAULON AUSTRALE f. PROLIFERUM Moldenke

Additional bibliography: Moldenke, *Phytologia* 34: 265, 267, 395, & 494. 1976.

Additional citations: MALAYA: Johore: Khatijah & Bastiah KLU. 18541 (Ac--photo of type, N--photo of type, Z--photo of type).

ERIOCAULON BENTHAMII Kunth

Additional bibliography: Hinton & Rzedowski, *Anal. Esc. Nac. Cienc. Biol.* 21: 61. 1975; Moldenke, *Phytologia* 32: 465. 1975.

ERIOCAULON BREVIPEDUNCULATUM Merr., *Philip. Journ. Sci. Bot.* 2: 265. 1907 [not E. brevipedunculatum Suesseng. & Heine, 1960].

Additional bibliography: Moldenke, *Phytologia* 29: 95 (1974) and 36: 42. 1977.

ERIOCAULON BREVISCAPUM Körn.

Additional bibliography: Moldenke, *Phytologia* 32: 466 (1975) and 36: 37. 1977.

Additional citations: INDIA: Meghalaya: Myrthong 1496 (N).

ERIOCAULON BROWNIANUM Mart.

Additional bibliography: Moldenke, *Phytologia* 32: 466 & 468 (1975), 34: 395 (1976), and 36: 37. 1977.

Waas refers to this plant as an herb with "white" flower-heads and found it growing at the edge of a stream in secondary montane forest at 4400 feet altitude, flowering and fruiting in January. Bernardi refers to the leaves as "plicate" [probably meaning conduplicate] and the heads as "white". He encountered the plant at 1700 meters altitude, flowering in December.

The Comanor 980, R. W. Read 2040 & 2270, and Waas 840, distributed as E. brownianum actually are E. nilagirensis Steud. Bernardi 16094 is a mixture with var. latifolium Moldenke.

Additional citations: INDIA: Meghalaya: Myrthong 1022 (N). SRI LANKA: Bernardi 15945 (N, W--2807708), 16094 in part (W--2807707); Waas 998 (N).

ERIOCAULON BROWNIANUM var. LATIFOLIUM Moldenke

Additional bibliography: Moldenke, *Phytologia* 34: 395 (1976) and 36: 37. 1977.

Recent collectors describe the flower-heads of this plant as

"white" or "white and fluffy" and encountered it along trails and streams and in open marshy grassy areas at edges of streams, at 1700--1800 m. altitude, although Sohmer and his associates refer to it as "rare" along roads, flowering in October. Bernardi describes the plant as "herba caespitosa, caule crasso in humo, folia aequitantia sat lata!"

Additional citations: INDIA: Meghalaya: Myrthong 1325 (N). SRI LANKA: Bernardi 16093 (Mu, N); Davidse & Sumithraarachchi 7993 (W--2784400); Sohmer, Jayasuriya, & Eliezer 8347 (Lc, W--2767934); Sohmer & Waas 8699 (Lc); Sumithraarachchi & Jayasuriya DBS.190 (W--2767929).

#### ERIOCAULON CEYLANICUM Körn.

Additional bibliography: Moldenke, *Phytologia* 34: 277 & 396. 1976.

Waas refers to this plant as an herb with a "blue flower" (apparently an error in observation) and found it growing by streams, flowering and fruiting in October. Davidse refers to the flower-heads as "white" and encountered the plant "in compact patches in grassland and forest" at 7000 feet altitude.

The Read & Desautels 2272, distributed as *E. ceylanicum*, seems, rather, to be *E. dalzellii* Körn.

Additional citations: SRI LANKA: Davidse 7607 (W--2784456); Waas 117 (W--2767932).

#### ERIOCAULON CINEREUM R. Br.

Additional bibliography: Satake, *Journ. Jap. Bot.* 49: 237. 1974; Hurusawa, *Excerpt. Bot. A.* 26: 99. 1975; Keys, *Chinese Herbs* 290 & 374. 1976; Moldenke, *Phytologia* 34: 396--398, 403, 488, & 491. 1976; A. L. Moldenke, *Phytologia* 36: 416. 1977.

Additional illustrations: Keys, *Chinese Herbs* 290. 1976.

Waas refers to this plant as an herb, to 15 cm. tall, and encountered it growing at the edge of a water-hole in "secondary scrub near stream edge". Davidse & Sumithraarachchi found it "in full rain-fed pool, the plants mostly submerged, on rock outcrops with bare rocks, small grassy soil pockets, and scattered low trees, at 100 m. altitude, and describe it as having "white" flowers.

Keys (1976) reports that in China the entire plant is "Pungent, sweet" and is used as an antiphlogistic and ophthalmic, the "Dose, 5--10 gm." Bernardi refers to the flower-heads as "fuscous".

Additional citations: INDIA: Meghalaya: Myrthong 1211 (N). SRI LANKA: Bernardi 15946 (W--2807706); Davidse & Sumithraarachchi 8948 (Ld); R. W. Read 2176 (Ld); Waas 751 (W--2784493).

#### ERIOCAULON COLLETTII Hook. f.

Additional bibliography: Naik, *Journ. Indian Bot. Soc.* 52: 109--111, fig. 1. 1973; Moldenke, *Phytologia* 29: 101. 1974.

Illustrations: Naik, *Journ. Indian Bot. Soc.* 52: 109, fig. 1. 1973.

ERIOCAULON COLLINUM Hook. f.

Additional bibliography: Moldenke, Phytologia 34: 263 & 398. 1976.

Recent collectors refer to the heads of this species as "black" or "gray" and have encountered it in boggy ground, along streams, and in roadside wet places among muddy patana grasses, flowering and fruiting from February to April and in September.

The Waas 1000, distributed as E. collinum, actually is E. thwaitesii Körn. instead.

Additional citations: SRI LANKA: Jayasuriya 2393 (Ld); Read & Desautels 2274 (Ld); Sumithraarachchi DBS.113 (W-2767927); Sumithraarachchi & Jayasuriya DBS.187 (W-2767928), DBS.205 (W-2768319); Sumithraarachchi & Waas DBS.261 (W-2768302), DBS.300 (W-276923).

ERIOCAULON COMPRESSUM Lam.

Additional bibliography: Lakela, Long, Fleming, & Genelle, Fl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 38. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, 259, 260, & 938. 1976; Moldenke, Phytologia 34: 398 (1976) and 36: 57. 1977.

LeBlanc encountered this plant in open pine woodlands and cut-over marsh areas. Correll & Popenoe refer to it as growing in the mud of savanna marshes, the heads "white".

Additional citations: FLORIDA: Martin Co.: Correll & Popenoe 48037 (N). ALABAMA: Mobile Co.: LeBlanc 270 (Ac).

ERIOCAULON CRASSISCAPUM Bong.

Additional synonymy: Eriocaulon molle "Mart. ex Körn." apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 99, in syn. 1976.

Additional bibliography: Moldenke, Phytologia 32: 470. 1975; Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 7, 25, 32--33, & 99, pl. 5, fig. 18--23. 1976.

Additional illustrations: Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 25, pl. 5, fig. 18--23. 1976.

This species is listed by Moldenke & Smith (1976) as probably occurring in Santa Catarina, Brazil, although no actual specimens of it from that state have as yet been seen by me. The vernacular names, "capipoatinga" and "sempre-viva-do-campo", are recorded for it and it is said to flower from June to January.

ERIOCAULON CRISTATUM Mart.

Additional bibliography: Moldenke, Phytologia 32: 470 (1975), 33: 14 (1976), and 34: 400. 1976.

Additional citations: INDIA: Meghalaya: Myrthong 1021 (N), 1203 (N).

ERIOCAULON CUBENSE Ruhl.

Additional & amended bibliography: León, Fl. Cuba, imp. 1, 1: 280 & 423. 1946; Moldenke, Phytologia 32: 470. 1975.



## ERIOCAULON CUSPIDATUM Dalz.

Additional bibliography: Moldenke, *Phytologia* 32: 470. 1975.

Additional citations: INDIA: Union Territory: Vartak RD.3 (Ac).

## ERIOCAULON DALZELLII Körn.

Additional bibliography: Moldenke, *Phytologia* 32: 484. 1976.

Recent collectors have found this plant growing in boggy ground, flowering and fruiting in September, and have misidentified it as E. ceylanicum Körn.

Additional citations: SRI LANKA: Read & Desautels 2272 (Ld).

## ERIOCAULON DECANGULARE L.

Additional bibliography: Sweet, *Hort. Brit.*, ed. 2, 597. 1830; Loud., *Hort. Brit.*, ed. 2, 719. 1832; Sweet, *Hort. Brit.*, ed. 3, 719. 1839; G. Don in Loud., *Hort. Brit. Suppl.* 2: 547. 1850;

Fleming, Genelle, & Long, *Wild Fls. Fla.* 25. 1976; Lakela, Long, Fleming, & Genelle, *Fl. Tampa Bay*, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 38. 1976; Long & Lakela, *Fl. Trop. Fla.*, ed. 2, 17, 259, 260, & 938. 1976; Moldenke & Sm. in Reitz, *Fl. Ilus. Catar.* I Erio: 6 & 99. 1976; Monteiro-Scanavacca, Mazzoni, & Giulietti, *Bol. Bot. Univ. S. Paulo* 4: 65. 1976; Moldenke, *Phytologia* 34: 249, 273, 274, 277, & 398 (1976) and 36: 28 & 39. 1977.

Additional illustrations: Fleming, Genelle, & Long, *Wild Fls. Fla.* 25 (in color). 1976.

Lakela and her associates (1976) call this the "giant pipewort" and state that in the Tampa Bay area of Florida it grows in wet soil and swamps, flowering in summer. Correll & Popenoe refer to it as growing in the mud of savanna marshes and describe the flower-heads as "white".

On July 7, 1977, I personally observed this species in cultivation (very successfully!) in a greenhouse at the New York Botanical Garden. Sweet (1830), Loudon (1832), and Don (1850) all list it as among the plants cultivated in England, introduced from North America in 1826. Fleming and his associates (1976) call it by the vernacular name of "hatpins": a very appropriate name if one is old enough to remember the hatpins of ladies' millinery.

The Webster & Wilbur 3199, distributed as typical E. decangulare, is better regarded as f. parviceps Moldenke.

Additional citations: SOUTH CAROLINA: Georgetown Co.: Kohlmeyer & Kohlmeyer 324 (Hm). FLORIDA: Martin Co.: Correll & Popenoe 48038 (N).

## ERIOCAULON DECANGULARE f. PARVICEPS Moldenke

Additional bibliography: Moldenke, *Phytologia* 32: 489. 1976.

Additional citations: NORTH CAROLINA: J. Kohlmeyer 2036 (Hm). Onslow Co.: J. Kohlmeyer 2033 (Hm). County undetermined: J. Kohlmeyer 2035 [Hofmann National Forest] (Hm). TEXAS: Tyler Co.: Webster & Wilbur 3199 (Mi).

## ERIOCAULON DECEMFLOSUM Maxim.

Additional bibliography: Moldenke, *Phytologia* 29: 113. 1974; Sa-

take, Journ. Jap. Bot. 49: 314. 1974.

ERIOCAULON DEPAUPERATUM Merr. in Merr. & Merritt, Philip. Journ. Sci. Bot. 5: 336—337. 1910.

Additional & emended bibliography: E. D. Merr. in Merr. & Merritt, Philip. Journ. Sci. Bot. 5: 336—337. 1910; Moldenke, Phytologia 34: 399. 1976.

ERIOCAULON DIANAE var. LONGIBRACTEATUM Fyson

Additional bibliography: Moldenke, Phytologia 34: 392 & 399. 1976.

Maxwell describes the bracts of this plant as "gray-tan" and encountered it "in open wet sandy marsh zone near a savanna", at 75 m. altitude.

Additional citations: THAILAND: Maxwell 75-1067 (Ac).

ERIOCAULON DICTYOPHYLLUM Körn.

Additional synonymy: Eriocaulon dictyophyllum "Mart. ex Moldenke" apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 99, in syn. 1976. Eriocaulon fluviatile "Bong. ex Moldenke" apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 99, in syn. 1976. Paepalanthus dictyophyllus "Mart. ex Moldenke" apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 101, in syn. 1976.

Additional bibliography: Moldenke, Phytologia 29: 194 (1974), 34: 399 (1976), and 35: 121. 1976; Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 7, 25, 38—40, 99, & 101, pl. 5, fig. 32. 1976.

Illustrations: Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 25, pl. 5, fig. 32. 1976.

The vernacular names, "capim-manso", "capipoatinga", "gravatá-manso", and "sempre-viva-dos-campos", have been recorded for this species (and many others) and it is said to flower in December and January.

ERIOCAULON DIMORPHOPETALUM Moldenke

Additional bibliography: Cárdenas de Guevara, Act. Bot. Venez. 10: 37. 1975; Moldenke, Phytologia 34: 399. 1976.

ERIOCAULON DIOECUM Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 280 & 423. 1946; Moldenke, Phytologia 32: 490. 1976.

ERIOCAULON ECHINOSPERMOIDEUM Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 281 & 423. 1946; Moldenke, Phytologia 32: 490. 1976.

ERIOCAULON ECHINOSPERMUM C. Wright

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 279—280 & 423. 1946; Moldenke, Phytologia 32: 490. 1976.

## ERIOCAULON ECHINULATUM Mart.

Additional bibliography: Moldenke, *Phytologia* 32: 263 & 399—400. 1976.

The Charoenphol, Larsen, & Warncke 4684 collection, cited below, is a mixture of this species with (mostly) E. luzulaefolium Mart. It was found growing in open wet grassland at 1100 m. altitude.

Additional citations: THAILAND: Charoenphol, Larsen, & Warncke 4684 in part (Mu).

## ERIOCAULON EHRENBERGIANUM Klotzsch

Additional bibliography: Moldenke, *Phytologia* 32: 490—491 & 499 (1976) and 34: 273. 1976.

The Schaffner 31, cited below, is a mixture with E. microcephalum H.B.K.

Additional citations: MEXICO: México: Schaffner 31 in part (Ut—3286108).

## ERIOCAULON EKMANII Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 280—281 & 423. 1946; Moldenke, *Phytologia* 32: 491. 1976.

## ERIOCAULON ELICHRYSOIDES Bong.

Additional bibliography: Moldenke, *Phytologia* 34: 400. 1976; Monteiro-Scanavacca & Mazzoni, *Bol. Bot. Univ. S. Paulo* 4: [23], 24, & 27. 1976.

Monteiro-Scanavacca & Mazzoni (1976) report that there is no vegetative reproduction from the apex of the inflorescence in this species (as there is in so many other species of the genus). They cite Semit 4449 from Minas Gerais, Brazil.

## ERIOCAULON FULIGINOSUM C. Wright

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 280 & 423. 1946; Moldenke, *Phytologia* 32: 492—493 & 505 (1976) ans 33: 11 & 184. 1976.

Liesner & Dwyer describe this plant as "with leaves submerged in water and heads above water of pond" and found it growing at sealevel, flowering and fruiting in January.

Additional citations: BELIZE: Liesner & Dwyer 1665 (Bm, Id).

## ERIOCAULON FUSIFORME Britton &amp; Small

Additional & emended bibliography: Fedde & Schust. in *Just, Bot. Jahrsber.* 45 (1): 20. 1923; León, Fl. Cuba, imp. 1, 1: 280 & 423. 1946; Moldenke, *Phytologia* 32: 493. 1976.

## ERIOCAULON GOMPHRENOIDES Kunth

Additional bibliography: Moldenke, *Phytologia* 29: 198. 1974; Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 6, 13, 15--19, & 99, pl. 2, fig. 7—12, & pl. 3 & 4. 1976.

Illustrations: Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 13, 16, & 17, pl. 2, fig. 7--12, & pl. 3 & 4. 1976.

The vernacular names, "capim-manso", "capipoatinga", "gravatá-

manso", and "sempre-viva-do-campo" are recorded for this species (and many others) and it is said to flower from October to December. Hatschbach encountered it on "campo locais brejosos junta a afloramentos de arenito".

It seems most unlikely to me now that the Smith, Reitz, & Klein 7683, previously cited by me as E. gomphrenoides, actually represents this taxon. On at least some plants of this collection, the sheath-apex is very plainly bilobed, which is not as it should be in E. gomphrenoides according to the original description. It seems likely to me now that this collection represents the closely related E. megapotamicum Malme which is supposed to have such sheaths.

Additional citations: BRAZIL: Paraná: Hatschbach 39220 (Ld).

#### ERIOCAULON GRAPHITINUM F. Muell. & Tate

Additional bibliography: Fedde & Schust. in Just, Bot. Jahresber. 45 (1): 20. 1923; Moldenke, Phytologia 32: 493. 1976.

#### ERIOCAULON GREGATUM Körn.

Additional bibliography: Moldenke, Phytologia 29: 198. 1974.

Additional citations: INDIA: Meghalaya: Myrthong 1051 (N).

#### ERIOCAULON HETEROLEPIS var. NIGRICANS Körn.

Additional bibliography: Moldenke, Phytologia 32: 494—495 (1976) and 36: 38. 1977.

Sinclair and his associates refer to this plant as "rare" and found it "sparingly in flower in damp places by springs" at 10,580 feet altitude, flowering in June. Material has been misidentified and distributed in some herbaria as E. beccarii Sueseng. & Heine and E. hookerianum Stapf.

Additional citations: GREATER SUNDA ISLANDS: Sabah: Sinclair, Kadim b. Tassim, & Kapis b. Sisiron 9137 (Mu).

#### ERIOCAULON HETEROPETALUM Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 281 & 423. 1946; Moldenke, Phytologia 32: 495. 1976.

#### ERIOCAULON HONDOENSE Satake

Additional bibliography: Moldenke, Phytologia 34: 400—401 & 404. 1976.

Additional citations: JAPAN: Honshu: Togashi MT.6849 [Fl. Jap. Exsic. 67] (N), MT.6857 [Fl. Jap. Exsic. 68] (N).

#### ERIOCAULON HUMBOLDTII Kunth

Additional bibliography: Cárdenas de Guevara, Act. Bot. Venez. 10: 36. 1975; J. A. Steyerl., Act. Bot. Venez. 10: 220, 226, & 232. 1975; Moldenke, Phytologia 34: 401. 1976.

Hatschbach has encountered this plant "nas agua razas de corre-go".

Additional citations: VENEZUELA: Bolívar: Hamann 2890 (Hm), 2891 (Hm); Hertel s.n. [Canaima, 3.4.1969] (Hm). BRAZIL: Bahia:

Hatschbach 39465 (Ld).

ERIOCAULON INFIRMUM Steud.

Additional bibliography: Moldenke, *Phytologia* 32: 495--496 (1976), 33: 9 (1976), 34: 266, 267, 401, & 494 (1976), and 36: 37 & 72. 1977.

Additional citations: INDIA: Meghalaya: Myrthong 1056 (N).

ERIOCAULON INSULARE Ruhl.

Additional & emended bibliography: León, *Fl. Cuba, imp. 1, 1*: 281 & 423. 1946; Moldenke, *Phytologia* 32: 496. 1976.

ERIOCAULON JAUENSE Moldenke

Additional bibliography: Moldenke, *Phytologia* 32: 496. 1976.

Additional citations: MOUNTED ILLUSTRATIONS: *Mem. N. Y. Bot. Gard.* 23: 849, fig. 4. 1972 (N--photo).

ERIOCAULON KLOTZSCHII Moldenke

Additional bibliography: Moldenke, *Phytologia* 29: 201. 1974.

Additional citations: GUYANA: R. Schomburgk 107 (Ut--325369B--isotype).

ERIOCAULON LACUSTRE Ruhl.

Additional & emended bibliography: León, *Fl. Cuba, imp. 1, 1*: 281 & 423. 1946; Moldenke, *Phytologia* 32: 497. 1976.

ERIOCAULON LANIGERUM H. Lecomte

Additional bibliography: Moldenke, *Phytologia* 26: 27. 1973; Satake, *Journ. Jap. Bot.* 49: 240. 1974.

ERIOCAULON LAOENSE var. MAXWELLII Moldenke, *Phytologia* 35: 109--111. 1977.

Bibliography: Moldenke, *Phytologia* 35: 109--111 (1977) and 36: 38. 1977.

Illustrations: Moldenke, *Phytologia* 35: 110. 1977.

Citations: THAILAND: Maxwell 74-376 (Ac--type, Z--isotype, Z--drawings of type).

ERIOCAULON LEPTOPHYLLUM Kunth

Additional bibliography: Moldenke, *Phytologia* 26: 460. 1973; Moldenke & Sm. in Reitz, *Fl. Ilus. Catar I Erio*: 6, 23--26, & 99, pl. 5, fig. 1--7. 1976.

Additional illustrations: Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 25, pl. 5, fig. 1--7. 1976.

The Pedersen 9266, distributed as E. leptophyllum and so filed in some herbaria, actually is E. argentinum Castell.

ERIOCAULON LEUCOGENES Ridl.

Additional bibliography: Fedde & Schust. in Just, *Bot. Jahresber.* 44: 19. 1922; Moldenke, *Phytologia* 26: 27. 1973.

ERIOCAULON LIGULATUM (Vell.) L. B. Sm.

Additional synonymy: Eriocaulon elichrysoides "sensu Kunth" apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 99, in syn. 1976. Eriocaulon kunthii var. j "Körn. ex Alv. Silv." apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 99, in syn. 1976.

Additional bibliography: Moldenke, Phytologia 34: 402. 1976; Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 6-11, 18, & 98-100, pl. 1. 1976.

Additional illustrations: Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 9, pl. 1. 1976.

Dombrowski refers to this plant as "abundant in brejo" (sedge meadow). The vernacular names, "capim-manso", "capipoatinga", "gravatá-manso", and "sempre-viva-do-campo", have been recorded for this (and many other) species and it is said to flower from September to November.

Additional citations: BRAZIL: Paraná: Dombrowski 6446 (Ld).

ERIOCAULON LINEARE Small

Additional bibliography: J. L. Thomas, Bull. Ala. Mus. Nat. Hist. 2: 9. 1976; Moldenke, Phytologia 34: 402 (1976) and 36: 29 & 57. 1977.

Thomas (1976) lists this species as a "Species of special concern" from the conservation standpoint in Alabama, recording it from only Escambia, Geneva, and Houston counties in that state; it is, however, also known from Covington and Baldwin counties.

ERIOCAULON LINEARIFOLIUM Körn.

Additional bibliography: Moldenke, Phytologia 32: 498. 1976.

The Anderson, Stieber, & Kirkbride "36510" cited by me in a previous installment of these notes (1973) is a typographic error for no. 36810.

ERIOCAULON LONGICUSPE Hook. f.

Additional bibliography: Moldenke, Phytologia 32: 498 (1976), 33: 10 & 14 (1976), and 34: 263. 1976.

The Jayasuriya & Sumithraarachchi 1567, distributed as E. longicuspe, actually is E. atratum Körn.

ERIOCAULON LUZULAEFOLIUM Mart.

Additional bibliography: Naik, Journ. Indian Bot. Soc. 52: 111-113, fig. 3. 1973; Bole, Excerpt. Bot. A.26: 302. 1975; Moldenke, Phytologia 32: 498. 1976.

Additional illustrations: Naik, Journ. Indian Bot. Soc. 52: 112, fig. 3. 1973.

Recent collectors have encountered this plant in open wet grasslands, at 1100-1700 m. altitude, flowering in September.

The Charoenphol, Larsen, & Warncke 4684 collection, cited below, is a mixture with (a little) E. echinulatum Mart.

Additional citations: THAILAND: Charoenphol, Larsen, & Warncke 4684 in part (Mu); Larsen & Larsen 34463 (Ac).

ERIOCAULON MAGNIFICUM Ruhl.

Additional bibliography: Moldenke, *Phytologia* 34: 403. 1976; Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 6, 13, 20—21, & 99, pl. 2, fig. 13—18. 1976.

Additional illustrations: Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 13, pl. 2, fig. 13—18. 1976.

The vernacular names, "capim-manso", "capipoatinga", "gravatá-manso", and "sempre-viva-do-campo", have been recorded for this (and many other) species and it is said to flower from September to February.

ERIOCAULON MAGNUM Abbiatti

Additional bibliography: Moldenke, *Phytologia* 34: 403. 1976. Schinini and his associates have encountered this plant "en embalsado".

Additional citations: ARGENTINA: Corrientes: Schinini & al. 12085 (Ac).

ERIOCAULON MAJUSCULUM Ruhl.

Additional bibliography: Moldenke, *Phytologia* 24: 475. 1972.

Bogner found what appears to be this species growing in a marsh, at 2200 meters altitude, flowering in March, but distributed it erroneously as Paepalanthus sp.

Additional citations: BRAZIL: Minas Gerais: Bogner 1166 (Mu).

ERIOCAULON MEGAPOTAMICUM Malme

Additional bibliography: Moldenke, *Phytologia* 34: 403 (1976) and 36: 34. 1977.

Dombrowski reports this plant "frequent" on sandy campos, flowering and fruiting in October.

Smith, Reitz, & Klein 7683, cited below, was previously cited by me as E. gomphrenoides Kunth, but seems (at least in some specimens) to have its peduncular sheath-apices definitely bilobed -- in E. gomphrenoides they are said in the original description to be truncate. It was found growing in bogs at 1650 m. altitude, flowering in November.

Additional citations: BRAZIL: Paraná: Dombrowski 6546 (Z). Santa Catarina: Smith, Reitz, & Klein 7683 (N, Z).

ERIOCAULON MELANOCEPHALUM Kunth

Additional & emended bibliography: León, *Fl. Cuba, imp. 1*, 1: 281 & 423. 1946; Moldenke, *Phytologia* 34: 256 & 403. 1976.

ERIOCAULON MICROCEPHALUM H.B.K.

Additional bibliography: Moldenke, *Phytologia* 32: 491 & 499—500 (1976), 33: 47 (1976), 35: 117, 128, 129, & 347 (1977), and 36: 30. 1977.

Weber and his associates encountered this species in a páramo bog with Azorella, Plantago rigida, Valeriana, and Ciminalis at 3310 m. altitude. Other recent collectors in Ecuador found it

"submersed in [a] small pond in areas of dry scrub 1—3 m. tall, in "xerophytic scrub 2—3 m. tall intermingled with meadows and drier grasslands", and "by small wet spring in humid páramo vegetation with an abundance of Espeletia hartwegiana", at altitudes of 2900—4350 m., flowering and fruiting in May. Humbles found it "with Espeletia". In Mexico, McGill and his associates encountered it in meadow bogs in pine forests on rocky slopes, at 8450 feet altitude.

The Schaffner 31, cited below, is a mixture with E. ehrenbergianum Klotzsch.

Additional citations: MEXICO: Durango: McGill, Reeves, Nash, & Pinkava P.13392 (N). México: Schaffner 31 in part (Ut—328610B). ECUADOR: Azuay: Holm-Nielsen, Jeppesen, Løjtnant, & Øllgaard 4991 (N), 5054 (N). Carchi: Holm-Nielsen, Jeppesen, Løjtnant, & Øllgaard 5277 (N); Humbles 6086 (Ld); Weber, Gradstein, & Lanier s. n. [3, 4 April 1976] (Ld).

#### ERIOCAULON MINIMUM Lam.

Additional bibliography: Moldenke, *Phytologia* 32: 500. 1976.

Jayasuriya & Faden collected what may be this species in shallow soil near a stream, at 760 meters altitude, where they note that it was "common", the heads "gray". It is classified here tentatively because it differs strikingly from other material so determined.

Additional citations: SRI LANKA: Jayasuriya & Faden 2410 (Z).

#### ERIOCAULON MISERRIMUM Ruhl.

Additional & emended bibliography: León, *Fl. Cuba*, imp. 1, 1: 280 & 423. 1946; Moldenke, *Phytologia* 32: 501. 1976.

#### ERIOCAULON MISERUM Körn.

Additional bibliography: Moldenke, *Phytologia* 29: 209. 1974.

Additional citations: INDIA: Meghalaya: Myrthong 1379 (Z), 1476 (N).

#### ERIOCAULON MITOPHYLUM Hook. f.

Additional bibliography: Moldenke, *Phytologia* 29: 209. 1974.

Additional citations: INDIA: Meghalaya: Myrthong 1191 (N).

#### ERIOCAULON MODESTUM Kunth

Additional synonymy: Eriocaulon hygropilus Mart. ex Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 99, in syn. 1976. Eriocaulon modestum "Auct. ex Herter" apud Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 99, in syn. 1976. Eriocaulon modestum f. elatior "Ruhl. ex Moldenke" apud Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 99, in syn. 1976. Eriocaulon modestum f. modestum [Kunth] apud Moldenke & Sm. in Reitz, *Fl. Ilus. Catar. I Erio*: 28. 1976.

Additional bibliography: Moldenke, *Phytologia* 34: 404. 1976;



Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 7, 25, 28--31, 99, & 100, pl. 5, fig. 10--17. 1976.

Additional illustrations: Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 25, pl. 5, fig. 10--17. 1976.

Vernacular names recorded for this species are "capim-manso", "capipoatinga", "gravatá-manso", and "sempre-viva-do-campo" (also applied to many other species) and it is said to flower from December to April.

*ERIOCAULON MODESTUM* var. *BREVIFOLIUM* Moldenke

Additional bibliography: Moldenke, *Phytologia* 32: 501. 1976.

The Irwin, Harley, & Smith "32195" cited by me in a previous (1972) installment of these notes is a typographic error for no. 32175.

*ERIOCAULON MODESTUM* f. *VIVIPARUM* Herzog

Additional synonymy: *Eriocaulon dusenii* "Diógo ex Moldenke & Sm." apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 31 & 99, in syn. 1976. *Eriocaulon modestum* f. *viviparum* "Herzog ex Moldenke & Smith" apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 99, in syn. 1976.

Additional bibliography: Moldenke, *Phytologia* 29: 209. 1974; Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 31 & 99. 1976.

The vernacular names, "capim-manso", "capipoatinga-de-broto", "gravatá-manso", and "sempre-viva-do-campo", are recorded for this plant (most of which are applied to many other taxa in this genus) and it is said to flower in December.

*ERIOCAULON NANELLUM* Ohwi

Additional bibliography: Moldenke, *Phytologia* 26: 31. 1973; Satake, *Journ. Jap. Bot.* 49: 313--314. 1974; Hurusawa, *Excerpt. Bot. A.26*: 99. 1975.

*ERIOCAULON NANELLUM* var. *PILIFERUM* Satake, *Journ. Jap. Bot.* 49: 313--314. 1974.

Bibliography: Satake, *Journ. Jap. Bot.* 49: 313--314. 1974; Hurusawa, *Excerpt. Bot. A.26*: 99. 1975.

This variety is distinguished by the pilose petals on the pistillate florets, the longer leaves and peduncles (10--20 cm.), and the whitish acute involucre bracts. It is based on B. Kawamura 316852 from Konuma moor, at an altitude of about 970 meters, near Shiobara-machi, Tochigi prefecture, Honshu, Japan, collected on August 7, 1973, and deposited in the herbarium of the National Science Museum in Tokyo. The leaves are 5 cm. long.

*ERIOCAULON NEO-CALEDONICUM* Schlecht.

Additional bibliography: Moldenke, *Phytologia* 34: 405. 1976.

Additional citations: NEW CALEDONIA: Franc 266 in part (W--1112352--cotype).

## ERIOCAULON NEPALENSE Prescott

Additional bibliography: Satake, Journ. Jap. Bot. 49: 237—239. 1974; Hurusawa, Excerpt. Bot. A.26: 99. 1975; Moldenke, Phytologia 34: 405. 1976.

Additional citations: INDIA: Meghalaya: Myrthong 1561 (N).

ERIOCAULON NEPALENSE var. LAOSENSE Satake, Journ. Jap. Bot. 49: 237—239, fig. 1 & 2. 1974.

Bibliography: Satake, Journ. Jap. Bot. 49: 237—239, fig. 1 & 2. 1974; Hurusawa, Excerpt. Bot. A.26: 99. 1975.

Illustrations: Satake, Journ. Jap. Bot. 49: 238, fig. 1 & 2. 1974.

This variety is based on T. Tuyama L.57379 from 2 km. south of Ban Phu Phao, about 23 km. northeast of Phangsavanh, Laos, collected on January 2, 1958, and deposited in the Botanical Institute herbarium in Tokyo. It differs in its broader leaves and in other respects.

## ERIOCAULON NILAGIRENSE Steud.

Additional bibliography: Moldenke, Phytologia 34: 405—406. 1976.

Recent collectors describe this plant as large, herbaceous, fleshy, 75 cm. tall, not deep-rooted, the leaves elongate, linear-oblong, the flower-heads "snowy-white, semiglobose, to 1.4 cm. in diameter", and the flowers white, although Waas comments that the "flower-cone [is] blackish when mature". They have found it growing in boggy ground and along footpaths by streams in secondary montane forests, at 1700—2500 m. altitude. Comanor refers to it as "frequent in running water", while Cramer found it to be quite "common".

The Bernardi 16094 is a mixture with E. brownianum Mart.

Additional citations: SRI LANKA: Bernardi 16094 in part (W—2807707); Comanor 980 (W); Cramer 3259 (W—2615826); R. W. Read 2040 (Ld), 2270 (Ld); Waas 840 (W, W—2784502).

## ERIOCAULON NILAGIRENSE f. PARVIFOLIUM Moldenke

Additional bibliography: Moldenke, Phytologia 34: 406. 1976.

Read & Desautels found this plant growing in boggy ground. Davidse refers to it as caespitose, with white flower-heads, and encountered it in marshy montane tussock grassland along streamlets, at 7000 feet altitude.

Additional citations: SRI LANKA: Davidse 7604 (W—2784405); Read & Desautels 2271 (Ld).

## ERIOCAULON NOVOGUINEENSE Van Royen

Additional bibliography: Moldenke, Phytologia 32: 503. 1976.

Croft & Leland describe what appears to be this species as a "very hard cushion herb, the leaves semi-glossy dark-green, the flowers light-brown, the roots white".

Additional citations: PAPUA NEW GUINEA: Croft & Leland LAE. 65874 (Mu, Z).

## ERIOCAULON ODORATUM Dalz.

Additional synonymy: Eriocaulon odoratum Moldenke, Biol. Abstr. 63: 2461, sphalm. 1977.

Additional bibliography: Moldenke, Phytologia 34: 485-486. 1976; Moldenke, Biol. Abstr. 63: 2461. 1977.

## ERIOCAULON OLIVACEUM Moldenke

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 280 & 423. 1946; Moldenke, Phytologia 32: 503. 1976.

## ERIOCAULON ORYZETORUM Mart.

Additional bibliography: Moldenke, Phytologia 32: 503-504. 1976.

The Larsens encountered this plant in wet grassland at 600-700 meters altitude, flowering and fruiting in September.

Additional citations: INDIA: Meghalaya: Myrthong 1491 (N). THAILAND: Larsen & Larsen 34135 (Ac).

## ERIOCAULON OVOIDEUM Britton &amp; Small

Additional & emended bibliography: Fedde & Schust. in Just, Bot. Jahresber. 45 (1): 20. 1923; León, Fl. Cuba, imp. 1, 1: 280 & 423. 1946; Moldenke, Phytologia 34: 486 (1976) and 36: 42. 1977.

The Eriocaulon ovoideum var. ulei Knuth listed by Fedde & Schuster (1923) is Dioscorea amarantoides var. ulei Knuth in the Dioscoreaceae.

## ERIOCAULON PARAGUAYENSE Körn.

Additional bibliography: Moldenke, Phytologia 34: 486. 1976.

Prance and his associates encountered this plant in buriti-grass swamps at 720 m. altitude, flowering in October.

Additional citations: BRAZIL: Mato Grosso: Prance, Lleras, & Coêlho 13982 (Z).

## ERIOCAULON PARKERI B. L. Robinson

Additional synonymy: Eriocaulon septangulare var. parkeri (Robins.) Boivin & Cayouette, Naturaliste Canad. 94: 524. 1967.

Additional & emended bibliography: Boivin & Cayouette, Naturaliste Canad. 94: 524. 1967; Rousseau, Géogr. Florist. Qué. [Trav. Doc. Cent. Étud. Nord 7:] 120-121, 382, 480, 550, 625, & 762, map 222. 1974; Moldenke, Phytologia 34: 486 (1976) and 36: 57. 1977.

## ERIOCAULON PELLUCIDUM Michx.

Additional & emended bibliography: Lepage, Naturaliste Canad. 101: 928. 1974; Krug, Excerpt. Bot. A, 26: 415. 1976; Rousseau, Géogr. Florist. Qué. [Trav. Doc. Cent. Étud. Nord. 7:] 120-121, 470, 498, 625, 705, & 762, maps 221 & 222. 1974; A. L. Moldenke, Phytologia 35: 62. 1976; Monteiro-Scanavacca, Mazzoni, & Giuliotti, Bol. Bot. Univ. S. Paulo 4: 66. 1976; Moldenke, Phytologia 34: 486-487 (1976) and 36: 57. 1977; F. H. Montgomery, Seeds & Fruits 108 & 219, fig. 4. 1977.

Additional illustrations: F. H. Montgomery, Seeds & Fruits 108,

fig. 4. 1977.

Montgomery (1977) describes the seeds of this plant as "0.7 x 0.5 x 0.5 mm, elliptic 4--5 in l.s., elliptic 6 in c.s.; surface obscurely rugulose, light brown".

The J. P. Standley 33, distributed as what is now called E. pellucidum, actually is Lachnocaulon glabrum Körn., while W. Bennett 417/73 is Syngonanthus flavidulus (Michx.) Ruhl.

#### ERIOCAULON PINARENSE Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 281 & 423. 1946; Moldenke, Phytologia 32: 492 & 505. 1976.

#### ERIOCAULON PSEUDOCOMPRESSUM Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 279 & 423, fig. 112. 1946; León & Alain, Fl. Cuba, imp. 2, 1: 279 & 423, fig. 112. 1974; Moldenke, Phytologia 34: 437. 1976.

Additional & emended illustrations: León, Fl. Cuba, imp. 1, 1: 279, fig. 112. 1946; León & Alain, Fl. Cuba, imp. 2, 1: 279, fig. 112. 1974.

#### ERIOCAULON QUINQUANGULARE L.

Additional bibliography: Moldenke, Phytologia 34: 487--488. 1976; Monteiro-Scanavacca, Mazzoni, & Giuliatti, Bol. Bot. Univ. S. Paulo 4: 65. 1976.

Read reports finding this plant growing "above water level when that is very low" in Sri Lanka.

The Comanor 880, distributed as E. quinquangulare, seems better placed as E. walkeri Hook. f.

Additional citations: SRI LANKA: R. W. Read 2177 (Ld); Sumithraarachchi DBS.666 (W--2806327).

#### ERIOCAULON RAVENELII Chapm.

Additional bibliography: Moldenke, Phytologia 29: 222. 1974; Lakela, Long, Fleming, & Genelle, Fl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 38. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, x, 259--[261], & 938. 1976.

Additional illustrations: Long & Lakela, Fl. Trop. Fla., ed. 2, [261]. 1976.

Lakela and her associates (1976) calls this species the "southern pipewort" and state that in the Tampa Bay area of Florida it inhabits pinelands and low ground, flowering in summer.

Additional citations: FLORIDA: Hillsborough Co.: A. P. Garber 37 (W--936873), s.n. [Tampa, Sept. 1877] (W--45320). Levy Co.: A. P. Garber s.n. [Levy Co., Nov. 1877] (W--45320).

#### ERIOCAULON REITZII Moldenke & Smith

Additional bibliography: Moldenke, Phytologia 29: 222. 1974; Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 6, 13, 22--24, & 100, pl. 2, fig. 19--24. 1976.

Illustrations: Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 13, pl. 2, fig. 19--24. 1976.

Although this binomial is marked as "spec. nov." in Moldenke & Smith (1976) by editorial error, it was first actually validly published in 1973 while the paper referred to was in press.

Vernacular names recorded for this species are "capim-manso", "capipoatinga-de-reitz", "gravatá-manso", and "sempre-viva-do-campo" and the plant is said to flower in October.

ERIOCAULON ROBUSTIUS (Maxim.) Mak.

Additional bibliography: Moldenke, *Phytologia* 34: 488 & 491. 1976; Moldenke, *Biol. Abstr.* 63: 2461. 1977.

ERIOCAULON ROBUSTO-BROWNIANUM Ruhl.

Additional bibliography: Naik, *Journ. Indian Bot. Soc.* 52: 109-111, fig. 2. 1973; Bole, *Excerpt. Bot. A.* 26: 302. 1975; Moldenke, *Phytologia* 34: 488. 1976.

Additional illustrations: Naik, *Journ. Indian Bot. Soc.* 52: 110, fig. 2. 1973.

ERIOCAULON ROLLANDII Rousseau

Synonymy: Eriocaulon septangulare f. rollandii (Rousseau) Lepage, *Naturaliste Canad.* 101: 928. 1974.

Additional bibliography: Moldenke, *Phytologia* 25: 69. 1972; Lepage, *Naturaliste Canad.* 101: 928. 1974; Krug, *Excerpt. Bot. A.* 26: 415. 1976.

This is a terrestrial species, not seen anywhere in water in its range in the Rimouski and Témiscouata regions of Québec.

ERIOCAULON SATAKEANUM Tatew. & Itô

Additional bibliography: Moldenke, *Phytologia* 25: 70. 1972; Satake, *Journ. Jap. Bot.* 49: 180. 1974.

ERIOCAULON SCARIOSUM J. E. Sm.

Additional bibliography: Moldenke, *Phytologia* 34: 489 (1976) and 36: 39. 1977.

The Clemens collections cited below exhibit a remarkable diversity in size of plant and length of peduncle. On her no. 42443 some plants are only 1.5--2.5 cm. tall and are apparently in full anthesis, while on no. 42099 some peduncles are up to 22 cm. in length. The small plants closely resemble E. nanum R. Br., but the heads are distinctly hairy under a handlens, while in E. nanum they are smooth. Mrs. Clemens encountered these plants along highway ditches, in swamps with Stylidium, and grassy places in boglets, flowering in April, June, October, and November, fruiting in April.

Additional citations: AUSTRALIA: Queensland: M. S. Clemens 42099 (Mi), 42360 (Mi), 42370 (Mi), 42443 (Mi), 44371 (Mi). GREAT BARRIER REEF: Bribie: M. S. Clemens 44113 (Mi).

ERIOCAULON SCLEROCEPHALUM Ruhl.

Additional & emended bibliography: León, *Fl. Cuba*, imp. 1, 1: 281

& 423. 1946; Moldenke, Phytologia 33: 12 & 15. 1976.

ERIOCAULON SEEMANNII Moldenke

Additional bibliography: Moldenke, Phytologia 34: 489. 1976.

Seymour has encountered this plant in pinebarrens.

Additional citations: NICARAGUA: Cabo Gracias a Dios: F. C. Seymour 3611 (Ft).

ERIOCAULON SELLOWIANUM Kunth

Additional synonymy: Eriocaulon sellowiana "Kunth ex Moldenke" apud Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 100, in syn. 1976. Eriocaulon sellowianum [Kunth apud Angely" ex Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 100, in syn. 1976. Eriocaulon sellowianum var. sellowianum [Kunth] apud Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 34. 1976.

Additional bibliography: Moldenke, Phytologia 34: 489 (1976), 35: 121 (1976), and 36: 34. 1977; Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 7, 25, 33--38, 98, & 100, pl. 5, fig. 30 & 31. 1976.

Additional illustrations: Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 25, pl. 5, fig. 30 & 31. 1976.

Hatschbach encountered this plant in "brejo, base de chapada", flowering and fruiting in October. Dombrowski reports it "frequente em beira de banhado". Vernacular names recorded for it are "caá-guaço", "capim-manso", "capipoatinga-de-sellow", "gravatá-manso", and "sempre-viva-do-campo" and it is said to flower from December to February.

Additional citations: BRAZIL: Goiás: Hatschbach 39022 (Ld). Paraná: Dombrowski 5848 (Ld), 6712 (Ld).

ERIOCAULON SELLOWIANUM var. LONGIFOLIUM Moldenke

Additional bibliography: Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 34 & 36--37. 1976; Moldenke, Phytologia 34: 489 (1976) and 36: 34. 1977.

Hatschbach encountered this plant in "brejo" (sedge meadow), flowering in October, and refers to the flowers as "white".

Vernacular names recorded for this variety are "capim-manso", "capipoatinga-de-sellow-de-folha-grande", "gravatá-manso", and "sempre-viva-do-campo" and it is said to flower in January and February. It is included in the Santa Catarina (Brazil) flora on the supposition that it occurs there, although no material from that state has yet been seen by me.

Additional citations: BRAZIL: Mato Grosso: Hatschbach 25254 (Ld).

ERIOCAULON SELLOWIANUM var. PARAENSE (Moldenke) Moldenke & Smith

Additional bibliography: Moldenke, Phytologia 34: 489--490 (1976) and 35: 121. 1976; Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 25, 34, 37--38, 99, & 100, pl. 5, fig. 24--29. 1976.

Illustrations: Moldenke & Sm. in Reitz, Fl. Ilust. Catar. I Erio: 25, pl. 5, fig. 24--29. 1976.

Dombrowski reports this plant as "abundant" or "frequent" in "banhado" and found it in flower there in October and November. The inflorescence-heads on her no. 6256 are globose and very hard and firm, not at all compressed in drying, much like those of typical E. decangulare L. It may well be incorrectly placed here.

Vernacular names recorded for this variety are "capim-manso", "capipoatinga-de-sellow-do-parana", "gravatá-manso", and "sempreviva-do-campo" and it is said to flower in December in Santa Catarina.

Additional citations: BRAZIL: Paraná: Dombrowski 6256 (Ia), 6549 (Ld), 6678 (Ld).

#### ERIOCAULON SETACEUM L.

Additional bibliography: Moldenke, *Phytologia* 34: 490 & 494 (1976) and 36: 57. 1977; Moldenke, *Biol. Abstr.* 63: 2461. 1977.

Additional citations: INDIA: Meghalaya: Myrthong 1091 (N).

#### ERIOCAULON SETACEUM var. CAPILLUS-NAIADIS (Hook. f.) Moldenke

Additional bibliography: Moldenke, *Phytologia* 34: 490. 1976.

Fosberg describes this plant as having its flower-heads "grayish, emergent, lower filiform submerged leaves green" and refers to it as "very common in fallow rice field, growing in 10--20 cm. of water". Sumithraarachchi reports the "surface roots green", while Waas comments "not very deep-rooted in the mud in waterhole near paddy field" and found it in both flower and fruit in August.

Additional citations: SRI LANKA: F. R. Fosberg 51799 (W); Sumithraarachchi DBS.670 (N), 678 (W--2806328); Waas 735 (W--2784485).

#### ERIOCAULON SEXANGULARE L.

Additional bibliography: G. Don in Loud., *Hort. Brit. Suppl.* 1: 633 (1832) and 2: 547. 1850; M. R. Henderson, *Malay. Nat. Journ.* 6: 212. 1950; Moldenke, *Phytologia* 34: 490--496 (1976) and 36: 38 & 40. 1977; Moldenke, *Biol. Abstr.* 63: 2461. 1977.

Waas describes this species as an "herb to 30 cm., flower buds white" and found it growing in secondary forest close to a stream; Balakrishnan encountered it in "paddy marsh, growing with Xyris", flowering and fruiting in January. Sumithraarachchi reports finding it "bordering paddy fields". Balgooy encountered it in sandy places "along a stream in rainforest" and refers to it as an herb with gray-brown flower-heads and white anthers.

The Waas 923, distributed as E. sexangulare, actually is E. willdenovianum Moldenke.

Additional citations: SRI LANKA: Balakrishnan NBK.1157 (W); Davidse 7826 (W--2784425); Sumithraarachchi DBS.669 (N, W--2806326); Waas 887 (W--2784431). MALAYA: Penang: Balgooy 2406 (N).

#### ERIOCAULON SIGMOIDEUM C. Wright

Additional & emended bibliography: León, *Fl. Cuba, imp.* 1, 1: 280 & 423. 1946; Moldenke, *Phytologia* 33: 12 & 15. 1976.

ERIOCAULON SOLLYANUM Royle

Additional bibliography: Moldenke, *Phytologia* 34: 492—493 (1976) and 36: 38. 1977.

Additional citations: INDIA: Meghalaya: Myrthong 1239 (N).

ERIOCAULON SPRUCEANUM f. VIVIPARUM Moldenke

Additional bibliography: Moldenke, *Phytologia* 33: 15—16 (1976) and 36: 34. 1977.

Recent collectors have found this plant growing "in dry catin-ga" vegetation.

Additional citations: BRAZIL: Roraima: Murça Pires, Cavalcante, Magnago, & Silva 13980 (Ld).

ERIOCAULON STANTONII Satake, *Journ. Jap. Bot.* 49: 314—317. 1974.

Bibliography: Satake, *Journ. Jap. Bot.* 49: 314—317. 1974; Hurusawa, *Excerpt. Bot. A.* 26: 99. 1975.

This new species is described from Nepal.

ERIOCAULON STEYERMARKII Moldenke

Additional bibliography: Cárdenas de Guevara, *Act. Bot. Venez.* 10: 36. 1975; Moldenke, *Phytologia* 33: 16. 1976.

ERIOCAULON STRICTUM Milne-Redhead

Additional bibliography: Moldenke, *Phytologia* 26: 464. 1973.

A letter from Robert Wingfield to me, dated April 19, 1977, lists this species from Mafia island and cites Vesey-Fitzgerald 5213/3 at Kew and at the East Africa Herbarium in Nairobi.

ERIOCAULON TENUIFOLIUM Klotzsch

Additional bibliography: Moldenke, *Phytologia* 34: 493. 1976.

Recent collectors speak of this plant as "common", describe the flowering-heads as white, and found it in anthesis in June.

Additional citations: GUYANA: Goodland 515 (N). BRAZIL: Roraima: Murça Pires & Leite 273 [*Herb. IPEAN 14797*] (Ld).

ERIOCAULON TENUISSIMUM Nakai

Additional bibliography: Fedde & Schust. in Just, *Bot. Jahresber.* 45 (1): 20. 1923; Moldenke, *Phytologia* 29: 233. 1974.

ERIOCAULON TEXENSE Körn.

Additional bibliography: J. L. Thomas, *Bull. Ala. Mus. Nat. Hist.* 2: 9. 1976; Moldenke, *Phytologia* 34: 493 (1976) and 36: 29. 1977.

Correll and his associates have encountered this plant "in seepage in scrub oak pinelands", flowering in May. Thomas (1976) includes it among his "Species of special concern" from the conservation standpoint in Alabama and records it from pitcherplant bogs in only Escambia, Mobile, and Washington counties in that state. As yet I have seen no material confirming these records for that state.

Additional citations: TEXAS: Tyler Co.: Correll, Johnston, & Edwin 22333 (N).



## ERIOCAULON THWAITESII Körn.

Additional bibliography: Moldenke, *Phytologia* 34: 494 & 495. 1976.

Waas refers to this plant as an herb, to 15 cm. tall, the "flower-heads white" [but they are virtually black on his dried specimens], and found the plant "in secondary forest edge near [a] stream". Others have found it in grassy roadside ditches through tea plantations.

Material of this species has been misidentified and distributed in some herbaria as E. collinum Hook. f.

Additional citations: SRI LANKA: Davidse 7822 (W--2784424); Davidse & Sumithraarachchi 7923 (W--2784393); Waas 1000 (W).

## ERIOCAULON TRUNCATUM Hamilt.

Additional bibliography: M. R. Henderson, *Malay. Nat. Journ.* 6: 212. 1950; Moldenke, *Phytologia* 34: 491 & 493--495. 1976; Moldenke, *Biol. Abstr.* 63: 2461. 1977.

The Bernardi 15946, distributed as E. truncatum, actually is E. cinereum R. Br.

Additional citations: INDIA: Meghalaya: Myrthong 1466 (N).

ERIOCAULON TUTIDAE Satake, *Journ. Jap. Bot.* 49: 180--183, fig. 1 & 2. 1974.

Bibliography: Satake, *Journ. Jap. Bot.* 49: 180--183, fig. 1 & 2. 1974; Hurusawa, *Excerpt. Bot. A.* 26: 99. 1975.

Illustrations: Satake, *Journ. Jap. Bot.* 49: 181 & 182, fig. 1 & 2. 1974.

This species is based on Z. Tutida s.n. from the Garimegi moor near Tashiro, Ugo-machi, Akita prefecture, Honshu, Japan, collected on September 14, 1973, and deposited in the herbarium of the National Science Museum in Tokyo. It is named in honor of the collector.

ERIOCAULON TUYAMAE Satake, *Journ. Jap. Bot.* 49: 237, 239, & 240, fig. 3 & 4. 1974.

Bibliography: Satake, *Journ. Jap. Bot.* 49: 237, 239, & 240, fig. 3 & 4. 1974.

Illustrations: Satake, *Journ. Jap. Bot.* 49: 239, fig. 3 & 4. 1974.

The type of this species was collected by T. Tuyama (no. L.57378) -- in whose honor it is named -- 2 km. south of Ban Phu Phao, about 23 km. northeast of Phangsavanh, Laos, on January 2, 1958, and is deposited in the herbarium of the Botanical Institute in Tokyo. Satake (1974) claims that "This species is near to E. lanigerum Lecomte in having ciliolate leaves, peduncles, vaginas, involucrel and floral bracts, however the female sepals are glabrous and carinate or narrowly alate on the back side".

## ERIOCAULON ULAEI Ruhl.

Additional synonymy: Eriocaulon ulaei var. ulaei [Ruhl.] apud

Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 12. 1976.

Additional bibliography: Moldenke, Phytologia 29: 285. 1974;  
Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 6, 11-15, &  
100, pl. 2, fig. 1-6. 1976.

Illustrations: Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 13, pl. 2, fig. 1-6. 1976.

Vernacular names recorded for this species are "capim-manso", "capipoatinga-de-ule", "gravatá-manso", and "sempre-viva-do-campo" and it is said to flower in January in Santa Catarina, Brazil.

ERIOCAULON ULAEI var. RADIOSUM Ruhl.

Additional bibliography: Moldenke, Phytologia 29: 236. 1974;  
Moldenke & Sm. in Reitz, Fl. Ilus. Catar. I Erio: 12, 14, 15, &  
100. 1976.

ERIOCAULON WALKERI Hook. f.

Additional bibliography: Moldenke, Phytologia 34: 495. 1976.  
Comanor encountered this plant "in open scrub community on sand,  
in herbaceous community".

Additional citations: SRI LANKA: Comanor 880 (W).

ERIOCAULON WILLDENOVIANUM Moldenke

Additional bibliography: Moldenke, Phytologia 34: 491 & 495-  
496. 1976.

Read and Jayaweera encountered this plant in swampy ground  
"under Hevea trees". It has been found in flower and fruit in  
December. Material has been misidentified and distributed in some  
herbaria as E. brownianum Mart. Poilane 8068 was previously er-  
roneously reported as E. sexangulare L.

Additional citations: SRI LANKA: Read & Jayaweera 2319 (W);  
Waas 923 (W). INDOCHINA: Tonkin: Poilane 8068 (N).

LACHNOCAULON Kunth

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1:  
279, 284, & 426. 1946; Follmann-Schrag, Excerpt. Bot. A.26: 510.  
1976; Lakela, Long, Fleming, & Genelle, Fl. Tampa Bay, ed. 3 [Bot.  
Lab. Univ. S. Fla. Contrib. 73:] 38-39, 151, & 165. 1976; Long &  
Lakela, Fl. Trop. Fla., ed. 2, 259, 260, 262, & 944. 1976; Molden-  
ke, Phytologia 34: 497 (1976), 35: 14 (1976), 35: 111, 288, 309, &  
509 (1977), and 36: 28-31, 43, & 57. 1977; Moldenke, Biol. Abstr.  
63: 2461. 1977.

Lakela and her associates (1976) gives "bog buttons" as the  
common name for members of this genus.

The Pollard s.n. [Tampa, March 7, 1898], distributed as Lachno-  
caulon, actually is Syngonanthus flavidulus (Michx.) Ruhl.

LACHNOCAULON ANCEPS (Walt.) Morong

Additional synonymy: Lachnocaulon anceps (Walt.) DC. ex Molden-  
ke, Phytologia 36: 43, in syn. 1977.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1:  
284 & 426. 1946; Long & Lakela, Fl. Trop. Fla., ed. 2, 260, 944, &

962. 1976; Moldenke, *Phytologia* 35: 14 (1976) and 36: 28--31, 43, & 57. 1977.

Hebert found this plant growing on open wooded hillsides and wooded marshes.

Long & Lakela (1976) regard *L. floridanum* Small and *L. glabrum* Körn. as synonyms of *L. anceps*. It seems to me that the latter, at least, is abundantly distinct, while the former is much more closely allied to *L. engleri* Ruhl. or *L. minus* (Chapm.) Small. Specimens intermediate between *L. anceps* and *L. glabrum* probably represent *L. anceps* f. *glabrescens* Moldenke.

Recent collectors have encountered *L. anceps* on moist slopes of sand hills. Arsène refers to it as "rare" in Saint Tammany Parish, Louisiana, while Mohr reports it "very common" in Mobile County, Alabama. Kral describes it as "forming large circular clumps in moist sandy peat of sedge bogs" and forming "large clumps, not as large nor as narrow-leaved as nearby *L. beyrichianum* in rather dry sand of longleaf pine - saw-palmetto forests".

L. C. Anderson, in a personal communication to me, lists this species (sens. lat.?) from the following counties of Florida: Bay, Bradford, Brevard, Broward, Charlotte, Dixie, Franklin, Gulf, Hillsboro, Holmes, Indian River, Jackson, Lee, Levy, Liberty, Madison, Manatee, Martin, Nassau, Okaloosa, Okeechobee, Orange, Osceola, Pinellas, St. Johns, St. Lucie, Santa Rosa, Seminole, Sumter, Taylor, Union, Volusia, and Wakulla.

Material of this species has been misidentified and distributed in some herbaria as *Eriocaulon* sp. On the other hand, the Brass 15148, Ekman 12410, and R. Kral 20039 & 20420, distributed as (and in the case of the Ekman collection previously cited by me as) typical *L. anceps*, are better placed as f. *glabrescens* Moldenke, while Combs & Baker 1113, Coville 70 & 101, Fox & Boyce 3780, McCarthy s.n. [Julio 1885] & s.n. [N. Carolina 1885], C. Mohr s.n. [Aug. 18, 1879], and Reynolds s.n. [St. Augustine, June '75] are *L. beyrichianum* Sporleder, R. Kral 18012, 18048, 18288, & 20424, J. P. Standley 33, and P. C. Standley 52589 are *L. glabrum* Körn., Drushel 9642, E. S. Ford 4644, R. Kral 15637, Meislahn 158a, C. Mohr s.n. [April 20, 1868], and O'Neill 7786 (in part) are *L. minus* (Chapm.) Small, and Milligan s.n. [May 1890] is *Syngonanthus flavidulus* (Michx.) Ruhl. Kral & Ricks 16991, at least in the United States National Herbarium, is a mixture with fragments of *Panicum* sp.

Additional citations: VIRGINIA: Dinwiddie Co.: Fernald & Long 6120 (W--1682737). Greensville Co.: Smith & Hodgdon Pl. Exsicc. Gray. 1028 (W--1828401). Nansemond Co.: Fernald, Long, & Clement 15239 (W--2003605). Prince George Co.: Fernald, Long, & Smart 5698 (W--1682490). NORTH CAROLINA: Beaufort Co.: Godfrey 4403 (W--1767462). Bladen Co.: Biltmore Herb. 2755 (W--331153). Brunswick Co.: Godfrey & Shunk 4118 (W--1767244). Columbus Co.: Godfrey &

Shunk 4190 (W-1767299). Craven Co.: Kearney 1940 (W-356593).  
 Greene Co.: Godfrey 4316 (W-1767396). Harnett Co.: Godfrey 4253  
 (W-1767344). Martin Co.: Drushel 10114 (W-1688981). New Hano-  
 ver Co.: M. A. Chase 3153 (W-594230); Coville 201 (W-45321).  
 Onslow Co.: Godfrey 4488 (W-1767535). Pender Co.: Hyams s.n.  
 [Burgaw, Aug. 1879] (W-152112). Sampson Co.: Godfrey 4511 (W-  
 1767552). SOUTH CAROLINA: Charleston Co.: Stewart s.n. [Charles-  
 ton] (W-202807). Darlington Co.: Norton s.n. [Hartsville, July  
 8, 1920] (W-1070504). Georgetown Co.: Godfrey & Tryon 51 (W-  
 1836996); J. Kohlmeier 2038 (Hm). Kershaw Co.: House 2644 (W-  
 514155). Lexington Co.: Godfrey & Tryon 1210 (W-1837924).  
 GEORGIA: Calhoun Co.: Thorne 3589 (W-2005898). Clinch Co.: R.  
Kral 24289 (W-2470347). Douglas Co.: Cronquist 5424 (W-1928743).  
 Emanuel Co.: R. M. Harper 804 (W-400280). Macon Co.: Pyron & Mc-  
Vaugh 498 (W-1811260). Miller Co.: Thorne 4426 (W-2005929).  
 Pierce Co.: R. Kral 24150 (W-2470416). Screven Co.: R. Kral  
24052 (W-2470432). Sumter Co.: R. M. Harper 443 (W-384447).  
 Worth Co.: Pollard & Maxon 562 (W-443076). FLORIDA: Alachua Co.:  
O'Neill 633 (W-1241628), 746 (W-1241627). Calhoun Co.: Canby s.  
n. [Magnolia] (W-202501). Clay Co.: Canby s.n. [Hibernia, 1869]  
 (W-45323, W-204860). Duval Co.: Curtiss 3021 (W-45324, W--  
 936868), 4139 (W-218358), 4861 (W-224477), s.n. [Jacksonville]  
 (W-152110); Fredholm 104 (W-264444). Lake Co.: Nash 1942 (W-  
 252693, W--309072). Lee Co.: Francis 61 (W-1036539). Levy Co.:  
Kral & Kral 6593 (W-2308330). Nassau Co.: Godfrey & Lindsey  
56895 (W-2329838). Okeechobee Co.: R. Kral 20478 (W-2470304).  
 Orange Co.: O'Neill s.n. [Bithlo, June 17, 1929] (W-1488705).  
 Osceola Co.: R. Kral 20468 (W-2470368); Swallen 300 (W-1631128).  
 Volusia Co.: R. Kral 20443 (W-2470337), 20453 (W-2470404). County  
 undetermined: Biltmore Herb. 2755a (W-335142); Chapman s.n.  
 [Florida] (W-45326); Herb. Chapman 554 (W-936769), s.n. [Flor-  
 ida] (W-957067). ALABAMA: DeKalb Co.: A. Ruth 125 (W-345309).  
 Mobile Co.: Hebert 238 (Ac); Mackenzie 4059 (W-618847); Mohr s.n.  
 [June 1879] (W-784497), s.n. [June-Aug.] (W--784498), s.n. [July]  
 (W-152111). MISSISSIPPI: Covington Co.: Webster & Wilbur 3337  
 (M, W-2068060). Jackson Co.: Skehan s.n. [Ocean Springs, 5/7/  
 1895] (W--309071); Tracy 5031 (W-344108). Pearl River Co.: R.  
Kral 17332 (W-2470308). LOUISIANA: Beauregard Par.: R. Kral  
20156 (W-2470389), 20197 (W-2460390); Kral & Ricks 16991 (W-  
 2470367). Rapides Par.: R. Kral 20069 (W-2470369). Saint Tam-  
 many Par.: Arsène 12142 (W-1033047), 12315 (W-1033056). TEXAS:  
 Newton Co.: Correll, Johnston, & Edwin 22288 (N).

LACHNOCAULON ANCEPS f. GLABRESCENS Moldenke

Additional bibliography: Moldenke, Phytologia 33: 20 & 21 (1976)

and 36: 28--31. 1977.

Brass describes this plant as having "whitish" flower-heads and forming cushions 20--35 cm. in diameter in dry low pinelands and on low sand-scrub ridges where he found it "abundant". Kral found it "usually at upper edge of bog with Pinguicula pumila on sandy clay peat of bog in longleaf pine country". On the Isla de Pinos, Cuba, where it has previously been regarded (incorrectly) as typical L. anceps (Walt.) Morong, it inhabits moist sandy pinelands.

It is worth pointing out that even the type collection of this form exhibits the variability ascribed to it -- some of the peduncles are densely pilose with more or less appressed antrorse hairs, others partially or completely glabrous, apparently not always connected with age. It has been found in flower in May and November and both in flower and fruit in July.

Material of this form has usually been identified and distributed in herbaria as typical L. anceps (Walt.) Morong or as L. minus (Chapm.) Small.

Additional citations: SOUTH CAROLINA: Kershaw Co.: House 2685 (W--514159). FLORIDA: Highlands Co.: Brass 15148 (W--2065381). Manatee Co.: S. M. Tracy 7585 (W--4422332--isotype). Martin Co.: R. Kral 20420 (W--2470305). LOUISIANA: Vernon Par.: R. Kral 20039 (W--2470388). ISLA DE PINOS: Ekman 12410 (N, S, W--1302554).

#### LACHNOCAULON BEYRICHIANUM Sporleder

Additional bibliography: Moldenke, *Phytologia* 33: 21 (1976) and 36: 29. 1977.

Combs and Baker describe this plant as a "common perennial in bunches in open sandy scrub"; Fox and Boyce found it "in turkey oak community on lakeshores"; Harper encountered it "in rather dry pine barrens in Neocene geologic formation overlaid by Lafayette and Columbia". It has been found in flower and fruit in June, July, and September. Coville encountered it on savannas in North Carolina.

Usually the flowering- and fruiting-heads of this species are rather soft, flattening out under pressure in drying [e.g., R. M. Harper 1491], but in Godfrey 4680 they are quite round and hard as in L. minus (Chapm.) Small; the leaves, however, are narrow and thin as in typical L. beyrichianum. Perhaps it represents a hybrid. Kral 20378 exhibits leaves that are somewhat broader than usual and similar to those of L. minus.

McCarthy s.n. [N. Carolina], Reynolds s.n. [St. Augustine, June '75], and Coville 101 comprise exceptionally small 1- or 2-peduncled plants with especially small heads, perhaps because of immaturity and poor growing conditions. The United States National Herbarium specimen of Mohr s.n. [Aug. 18, 1879] from Alabama includes 2 small scapes of L. engleri Ruhl., possibly accidentally included during mounting and actually belonging to Herb. Chapman s.n. [St. Andrew's Bay] from Florida.

Material of L. beyrichianum has been misidentified and distributed in some herbaria as L. digyllum Körn. On the other hand, the Curtiss 3022, distributed as L. beyrichianum, actually is the type collection of L. eciliatum Small, while Nash 1184 is the type collection of L. engleri Ruhl. and R. M. Harper 1607, Mohr s.n. [April 20, 1868], and Nash 1148, 1295, & 1855 are L. minus (Chapm.) Small. R. Kral 20418 appears to be a mixture with L. glabrum Körn.

Additional citations: NORTH CAROLINA: Bladen Co.: Fox & Boyce 3780 (W--2265510). New Hanover Co.: Coville 70 (W--45322), 101 (W--45318); Godfrey 4680 (W--1767654). County undetermined: McCarthy s.n. [Julio 1885] (W--152109), s.n. [N. Carolina] (W--45325). GEORGIA: Charlton Co.: R. M. Harper 1491 (W--431796). FLORIDA: Martin Co.: R. Kral 20418 in part (W--2470379). Orange Co.: Combs & Baker 1113 (W--592685). Saint Johns Co.: Reynolds s.n. [St. Augustine, June '75] (W--936867). Saint Lucie Co.: R. Kral 20378 (W--2470381). Volusia Co.: R. Kral 20441 (W--2470338). ALABAMA: Mobile Co.: Mohr s.n. [Aug. 18, 1879] (W--784496).

#### LACHNOCAULON CUBENSE Ruhl.

Additional & emended bibliography: León, Fl. Cuba, imp. 1, 1: 284 & 426. 1946; Moldenke, Phytologia 33: 21. 1976.

#### LACHNOCAULON DIGYLLUM Körn.

Additional synonymy: Lachnocaulon digyllum Sporl. ex Moldenke, Phytologia 36: 43, in syn. 1977.

Additional bibliography: Moldenke, Phytologia 33: 21 (1976) and 36: 43. 1977.

Additional citations: FLORIDA: Bay Co.: R. Kral 15667 (W--2470435). Escambia Co.: R. Kral 17634 (W--2470436), 23169 (W--2470424).

#### LACHNOCAULON ECILIATUM Small

Additional bibliography: Moldenke, Phytologia 26: 184. 1973; Lakela, Long, Fleming, & Genelle, Pl. Tampa Bay, ed. 3 [Bot. Lab. Univ. S. Fla. Contrib. 73:] 39 & 165. 1976; Long & Lakela, Fl. Trop. Fla., ed. 2, 262 & 944. 1976; Moldenke, Phytologia 36: 29. 1977.

Lakela and her associates (1976) reduce L. eciliatum to the synonymy of L. minus (Chapm.) Small. It seems to me, however, that the flowering- and fruiting-heads of L. eciliatum are usually softer and more apt to crush and become flattened under the pressure of the plant-press.

Brass describes L. eciliatum as gregarious and very abundant on open sandy lakeshores, flowering and fruiting in January. Material has been misidentified and distributed in some herbaria as L. beyrichianum Sporleder, L. engleri Ruhl., and L. minus (Chapm.) Small. In L. minus the flowering- and fruiting-heads are normally quite hard, and do not flatten out in pressing unless very immature.